

- 15 -

13617ID Ahmadi

DUALTONE MULTI FREQUENCY SIGNAL DETECTION

5

ABSTRACT

A signalling tone detector for use in a communications network for the
10 detection of dual frequency multi-tone (DTMF) pairs of signal tones in a time
division multiplex (TDM) signal. The detector comprises first and second arrays of
adaptive notch filters corresponding to the rows and columns of a subscriber's
pushbutton key set. Each said notch filter responds to a respective signal tone by
the generation of a corresponding output signal. A logic circuit identifies from a
15 combination of output signals from the adaptive notch filters the presence or
absence of a pair of signal tones and, when the presence of a pair of signal tones
has been identified, for decodes that pair of tones to corresponding digit
information. The detector is used in an arrangement for compressing and
packetising TDM traffic for transport over a connectionless network. To prevent
20 distortion, the DTMF tones are decoded to digit information prior to transport over
the connectionless network.